

We Claim

1. A blade cooling arrangement comprising a blade tip
5 including a coolant gallery in use upstream of flow
entrainment means, the gallery including release passages to
release coolant in use close to the blade tip surface whilst
the flow entrainment means entrains that released coolant to
facilitate flow isolation from turbulent air created by a
10 shroud or leading edge of the blade tip.
2. An arrangement as claimed in claim 1 wherein the
gallery includes a cavity from which the release passages
extend.
3. An arrangement as claimed in claim 1 wherein the
15 release passages extend laterally towards the flow
entrainment means.
4. An arrangement as claimed in claim 1, wherein the
release passages have a slight downward inclination towards
the flow entrainment means and in use project the coolant
20 flow in that slight downward inclination.
5. An arrangement as claimed in claim 1 wherein the flow
entrainment means comprises upstanding fins to form channels
for entrainment of the coolant flow.
6. An arrangement as claimed in claim 5 wherein the fins
25 extend above the height of the release passages.
7. An arrangement as claimed in claim 5 wherein the fins
are substantially perpendicular to the blade tip surface.
8. An arrangement as claimed in any of claims 5, 6 or 7
wherein each fin has substantially the same height.
- 30 9. An arrangement as claimed in claim 5 wherein the fins
have different heights and/or shapes and/or presentational
angles relative to the respective release passages for
specific coolant entrainment as required for a particular
part of the blade tip dependent upon desired cooling
35 efficiency and/or blade structural integrity.

10. An arrangement as claimed in claim 5 wherein the fins provide additional contact surface area for enhanced heat transfer to the coolant air flow.
11. An arrangement as claimed in any claim 1 wherein the flow entrainment means define channels through which the coolant flow is driven in use by rotation of the blade tip.
12. An arrangement as claimed in claim 1 wherein the blade tip includes one of ripple strips, trip strips and other heat transfer augmentation features to improve heat transfer between the coolant air flow and the blade tip.
- .